

# H4 HD Outdoor Dome Camera with Self-Learning Video Analytics

Avigilon offers a broad range of high definition cameras – from 1 – 5 MP and 4 – 7K (based on horizontal resolution) – and are available in a variety of formats, including dome, panoramic and fixed. Whether it’s a small storefront that requires a few cameras or a large complex system requiring complete coverage of numerous areas, you can trust that you’re getting an exceptional solution for your security needs.

The innovative H4 HD outdoor dome cameras are just one way Avigilon can help provide effective monitoring and protection.



The H4 HD outdoor dome cameras are a great solution for monitoring both daytime and nighttime activities, with peace of mind due to their vandal resistant construction. Embedded with self-learning video analytics, the H4 HD cameras seamlessly integrate with Avigilon Control Center (ACC)<sup>™</sup>, allowing security personnel to respond proactively and mitigate an incident before damage is done. They feature an integrated lens for remote focus and zoom control and are ONVIF compliant for easy integration.

Avigilon outdoor dome cameras are equipped with new Triple Exposure Ultra-Wide Dynamic Range (WDR) and patented LightCatcher<sup>™</sup> technology, ensuring you receive the excellent image detail. P-Iris control also allows the cameras to automatically set their iris position to enhance image quality in all lighting conditions, while onboard storage capabilities let you manage storage directly on the cameras using a standard SD memory card. Avigilon HDSM SmartCodec technology<sup>™</sup> H4 platform optimizes the video stream in real time using automatic ROI encoding to save bandwidth and storage requirements while maintaining image quality.

## KEY FEATURES

1-5 megapixel and 4K Ultra HD (8 MP ) resolution
Patented Advanced Video Pattern Detection and Teach by Example Technology
Self-learning video analytics
Patented High Definition Stream Management (HDSM) <sup>™</sup> Technology
Available with 3-9 mm F1.3, 4.3-8 mm F1.8, or 9-22 mm F1.6 P-Iris lens with remote focus and zoom
Wifi camera configuration support
Zoom and content adaptive integrated IR (Infrared) LEDs provide uniform illumination in the dark, even at 0 lux, up to a maximum of 30 m (98 ft) away
Avigilon LightCatcher technology provides exceptional image quality in low light environments
Triple Exposure Ultra Wide Dynamic Range (1-3 MP models)
ONVIF compliant with version 2.2.0 of the Analytics Service Specification
Vandal resistant construction and IP66 compliant
Avigilon HDSM SmartCodec technology for reduce bandwidth and storage requirements
Idle Scene Mode lowers bandwidth and storage usage if there are no motion events detected in the scene
Full Feature or High Framerate camera operating modes (4K Ultra HD model)

# Specifications

		1.0 MP	2.0 MP	3.0 MP	5.0 MP	4K ULTRA HD (8.0 MP)	
<b>IMAGE PERFORMANCE</b>	Image Sensor	1/2.8" progressive scan CMOS			1/1.8" progressive scan CMOS	1/2.3" progressive scan CMOS	
	Aspect Ratio	16:9			4:3	16:9	
	Active Pixels (H x V)	1280 x 720	1920 x 1080	2048 x 1536	2592 x 1944	3840 x 2160	
	Imaging Area (H x V)	4.8 mm x 2.7mm; 0.189" x 0.106"		5.12 mm x 3.84 mm; 0.202" x 0.151"	6.22 mm x 4.66 mm; 0.245" x 0.183"	5.95 mm x 3.35 mm; 0.234" x 0.132"	
	IR Illumination Option (high power 850 nm LEDs)	30 m (98 ft) max. distance at 0 lux				15 m (50 ft) max distance at 0 lux	
	Minimum Illumination	3 - 9 mm lens:	0.04 lux (F1.3) in color mode; 0.008 lux (F1.3) in monochrome mode			N/A	N/A
		4.3 - 8 mm lens:	N/A			0.033 lux (F1.8) in color mode; 0.0066 lux (F1.8) in monochrome mode	0.29 lux (F1.8) in color mode; 0.058 lux (F1.8) in monochrome mode
		9 - 22 mm lens:	0.08 lux (F1.6) in color mode; 0.016 lux (F1.6) in monochrome mode		0.026 lux (F1.6) in color mode; 0.005 lux (F1.6) in monochrome mode	N/A	
	Image Rate (Full Resolution)	30 fps		30 fps (20 fps with WDR enabled)	30 fps	20 fps (30 fps in High Framerate mode)	
	Dynamic Range	67 dB			83 dB	91 dB	
	Dynamic Range (WDR Enabled)	120 dB triple exposure (20 fps or less); 100 dB dual exposure (30 fps)			N/A		
	Resolution Scaling	Down to 768 x 432			Down to 1792 x 1344	Down to 3072 x 1728	
	Camera Operating Mode	N/A				Full Feature or High Framerate mode (HDSM 2.0 and analytics disabled in High Framerate mode)	
	3D Noise Reduction Filter	Yes					
<b>LENS</b>	Lens	3 - 9 mm lens:	F1.3, P-Iris, remote focus and zoom				
		4.3 - 8 mm lens:	F1.8, P-Iris, remote focus and zoom				
		9 - 22 mm lens:	F1.6, P-Iris, remote focus and zoom				
	Angle of View	3 - 9 mm lens:	30° – 91°	32° – 98°		N/A	
		4.3 - 8 mm lens:	N/A	N/A		46° – 86°	44° – 81°
		9 - 22 mm lens:	14° – 29°	15° – 31°		18° – 41°	N/A
<b>IMAGE CONTROL</b>	Image Compression Method	H.264 (MPEG-4 Part 10/AVC), Motion JPEG					
	Streaming	Multi-stream H.264 and Motion JPEG					
	Bandwidth Management	(1.0 - 3.0 MP) HDSM; (5.0 MP and 4K Ultra HD) HDSM 2.0; (ALL) Idle Scene Mode					
	Motion Detection	Pixel and classified objects					
	Camera Tampering Detection	Yes					
	Electronic Shutter Control	Automatic, Manual (1/6 to 1/8000 sec)					
	Iris Control	Automatic, Manual					
	Day/Night Control	Automatic, Manual					
	Flicker Control	50 Hz, 60 Hz					
	White Balance	Automatic, Manual					
	Backlight Compensation	Adjustable					
	Privacy Zones	Up to 64 zones					
	Audio Compression Method	G.711 PCM 8 kHz					
	Audio Input/Output	Line level input and output, A/V mini-jack (3.5 mm)					
	Video Output	(1.0 - 2.0 MP only) NTSC/PAL, A/V mini-jack (3.5 mm)					
	External I/O Terminals	Alarm In, Alarm Out					
	<b>NETWORK</b>	USB Port	USB 2.0				
Network		100BASE-TX					
Cabling Type		CAT5					
Connector		RJ-45					
ONVIF		ONVIF compliant with version 1.02, 2.00, Profile S and 2.2.0 of the Analytics Service Specification (*bounding boxes and scene descriptions not available with third-party VMS)					
Security		Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication					
Protocol		IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTP, TCP, UDP, IGMP, ICMP, DHCP, Zeroconf, ARP					
Streaming Protocols		RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP					
Device Management Protocols		SNMP v2c, SNMP v3					
<b>MECHANICAL</b>		Dimensions (LxWxH)	<b>PENDANT DOME CAMERA</b>		<b>SURFACE MOUNT OUTDOOR DOME CAMERA</b>		
	dome camera only:		172 mm x 172 mm x 124 mm; (6.8" x 6.8" x 4.9")		163 mm x 163 mm x 121 mm; (6.4" x 6.4" x 4.8")		
	with wall mount (H4-MT-WALL1):		275 mm x 172 mm x 152.1 mm (10.8" x 6.8" x 6.0")				
	Weight	dome camera only:	1.55 kg (3.42 lbs)		1.35 kg (2.97 lbs)		
		with wall mount (H4-MT-WALL1):	3.00 kg (6.62 lbs)				
		with NPT mount (H4-MT-NPTA1):	1.80 kg (3.98 lbs)				
	Dome Bubble	Polycarbonate, clear					
	Body	Aluminum					
	Housing	Pendant mount, vandal resistant - with wall mount (H4-MT-WALL1) / NPT mount (H4-MT-NPTA1)			Surface mount, vandal resistant		
	Finish	Powder coat, RAL 9003					
	Adjustment Range	360° pan, 9° – 95° tilt (30° – 95° with -IR option), ±180° azimuth					
Onboard Storage	SD/SDHC/SDXC slot – minimum class 4; class 6 or better recommended						
<b>ELECTRICAL</b>	Power Consumption	7 W (9 W for -IR option)					
	Power Source	VDC: 12 V +/- 10%, 7 W min (9 W min with -IR option)			PoE: IEEE802.3af Class 3 compliant		
		VAC: 24 V +/- 10%, 10 VA min (13 VA min with -IR option)					
	Power Connector	2-pin terminal block					
	RTC Backup Battery	3V manganese lithium					
<b>ENVIRONMENTAL</b>	Operating Temperature	-40 °C to +60 °C (-40 °F to 140 °F) (8.0 MP only) -40 °C to +50 °C (-40 °F to 122 °F)					
	Storage Temperature	-10 °C to +70 °C (14 °F to 158 °F)					
	Humidity	0 - 95% non-condensing					

CERTIFICATIONS	Certifications/Directives	UL	cUL	CE	ROHS	WEEE	RCM	KC	EAC
Safety	UL 60950-1			CSA 60950-1		IEC/EN 60950-1		IEC 62471 (for -IR options only)	
Environmental	UL/CSA/IEC 60950-22			IEC 60529 IP66 Rating		IK10 Impact Rating			
Electromagnetic Emissions	FCC Part 15 Subpart B Class B			IC ICES-003 Class B		EN 55032 Class B		EN 61000-6-3	EN 61000-3-2 EN 61000-3-3 KN 32
Electromagnetic Immunity	EN 55024					EN 61000-6-1			KN 35

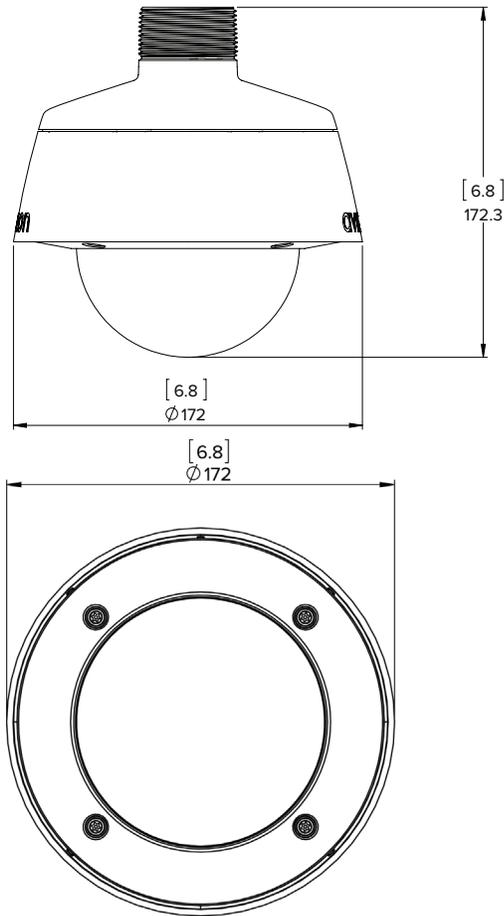
**SUPPORTED VIDEO ANALYTICS EVENTS**

Objects in Area	The event is triggered when the selected object type moves into the region of interest.
Object Loitering	The event is triggered when the selected object type stays within the region of interest for an extended amount of time.
Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
Object Appears or Enters Area	The event is triggered by each object that enters the region of interest. This event can be used to count objects.
Object Not Present in Area	The event is triggered when no objects are present in the region of interest.
Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.
Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.
Object Stops in Area	The event is triggered when an object in a region of interest stops moving for the specified threshold time.
Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
Tamper Detection	The event is triggered when the scene unexpectedly changes.

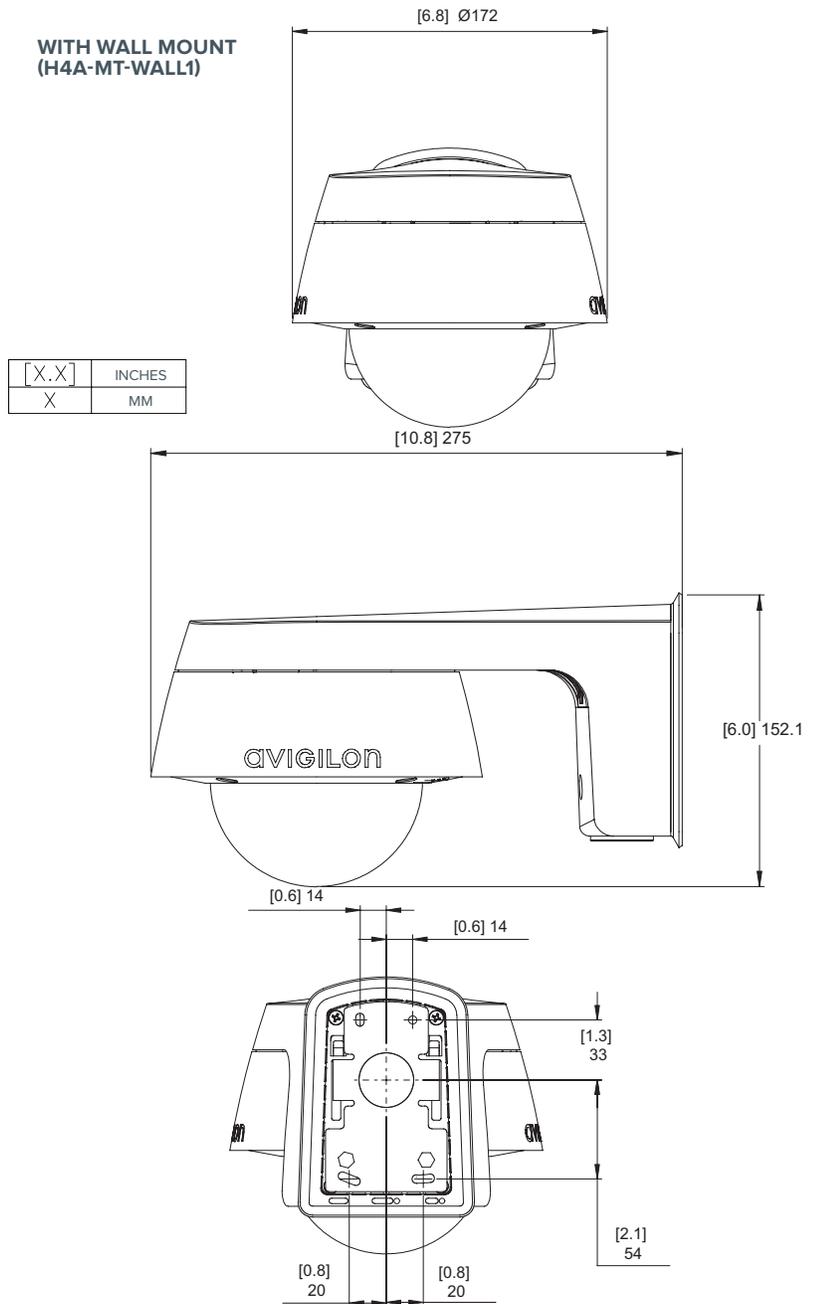
# Outline Dimensions

## Pendant Dome Camera

**WITH NPT MOUNT (H4A-MT-NPTA1)**

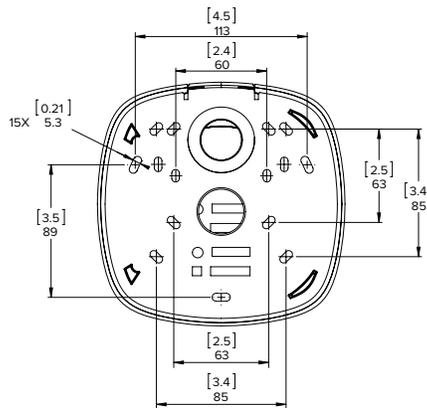
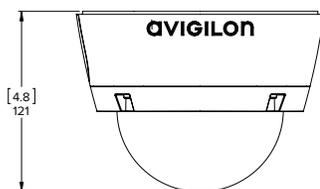
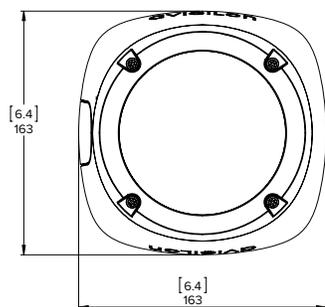


**WITH WALL MOUNT (H4A-MT-WALL1)**



# Surface Mount Outdoor Dome Camera

(H4A-DO)



## Ordering Information

PENDANT DOME CAMERAS	MP	WDR	LightCatcher Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-DP1	1.0	✓	✓	✓	3 - 9 mm		✓
1.0C-H4A-DP1-IR	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-DP2	1.0	✓	✓	✓	9 - 22 mm		✓
2.0C-H4A-DP1	2.0	✓	✓	✓	3 - 9 mm		✓
2.0C-H4A-DP1-IR	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-DP2	2.0	✓	✓	✓	9 - 22 mm		✓
3.0C-H4A-DP1	3.0	✓	✓	✓	3 - 9 mm		✓
3.0C-H4A-DP1-IR	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-DP2	3.0	✓	✓	✓	9 - 22 mm		✓
5.0L-H4A-DP1	5.0		✓	✓	4.3 - 8 mm		✓
5.0L-H4A-DP1-IR	5.0		✓	✓	4.3 - 8 mm	✓	✓
5.0L-H4A-DP2	5.0		✓	✓	9 - 22 mm		✓
8.0-H4A-DP1	8.0		✓	✓	4.3 - 8 mm		✓
8.0-H4A-DP1-IR	8.0		✓	✓	4.3 - 8 mm	✓	✓
H4A-MT-WALL1	Indoor/Outdoor Pendant Wall Arm Mount						
H4A-MT-NPTA1	Indoor/Outdoor Pendant NPT Mount						
H4A-DP-SMOK1	Dome Camera Cover with Smoked Bubble						
H4A-DP-CLER1	Dome Camera Cover with Clear Bubble						
H4-MT-POLE1	Aluminum pole mounting bracket for H4 HD Pendant Dome Cameras and H4 HD Bullet Cameras						
H4-MT-CRNR1	Aluminum corner mounting bracket for H4 HD Pendant Dome Cameras and H4 HD Bullet Cameras						
H4A-AC-GROM1	Camera Sealing Grommet, Pack of 10						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wifi Adapter						
CM-AC-AVIO1	3.5 mm Jack with 1.8 m Fly Wires						
CM-AC-GROM1	Pipe Grommet, Pack of 10						
SURFACE MOUNT OUTDOOR DOME CAMERAS	MP	WDR	LightCatcher Technology	Analytics	Lens	IR	HDSM SmartCodec
1.0C-H4A-DO1	1.0	✓	✓	✓	3 - 9 mm		✓
1.0C-H4A-DO1-IR	1.0	✓	✓	✓	3 - 9 mm	✓	✓
1.0C-H4A-DO2	1.0	✓	✓	✓	9 - 22 mm		✓
2.0C-H4A-DO1	2.0	✓	✓	✓	3 - 9 mm		✓
2.0C-H4A-DO1-IR	2.0	✓	✓	✓	3 - 9 mm	✓	✓
2.0C-H4A-DO2	2.0	✓	✓	✓	9 - 22 mm		✓
3.0C-H4A-DO1	3.0	✓	✓	✓	3 - 9 mm		✓
3.0C-H4A-DO1-IR	3.0	✓	✓	✓	3 - 9 mm	✓	✓
3.0C-H4A-DO2	3.0	✓	✓	✓	9 - 22 mm		✓
5.0L-H4A-DO1	5.0		✓	✓	4.3 - 8 mm		✓
5.0L-H4A-DO1-IR	5.0		✓	✓	4.3 - 8 mm	✓	✓
5.0L-H4A-DO2	5.0		✓	✓	9 - 22 mm		✓
8.0-H4A-DO1	8.0		✓	✓	4.3 - 8 mm		✓
8.0-H4A-DO1-IR	8.0		✓	✓	4.3 - 8 mm	✓	✓
H4A-DO-SMOK1	Outdoor Dome Camera Cover with Smoked Bubble						
H4A-DO-CLER1	Outdoor Dome Camera Cover with Clear Bubble						
H4-AC-WIFI2-NA / H4-AC-WIFI2-EU	USB Wifi Adapter						
H4A-AC-GROM1	Camera Sealing Grommet, Pack of 10						
CM-AC-AVIO1	3.5 mm Jack with 1.8 m Fly Wires						
CM-AC-GROM1	Pipe Grommet, Pack of 10						